



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4256  
 UNIQUE ID NUMBER: 1PW051  
 COMBUSTOR:  
 ENGINE TYPE: TF

BYPASS RATIO: 4.7  
 PRESSURE RATIO ( $\pi_{00}$ ): 29.3  
 RATED THRUST ( $F_{00}$ ) (kN): 252.4

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	1.8	17.4	59.9	18.4
AS % OF ORIGINAL LIMIT	9.4	14.8	60.8	100.2
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			76.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			91.0	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			103.4	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			121.9	

### DATA STATUS

- PRE-REGULATION  
 x CERTIFICATION  
 - REVISED (SEE REMARKS)

### TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES  
 - DEDICATED ENGINES TO PRODUCTION STANDARD  
 - OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
 (ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
 x OUT OF PRODUCTION (DATE: - )  
 - OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO <sub>x</sub>	
TAKE-OFF	100	0.7	2.449	0.11	0.08	32.50	14.3
CLIMB OUT	85	2.2	1.981	0.17	0.14	24.60	
APPROACH	30	4.0	0.647	0.25	0.90	11.60	
IDLE	7	26.0	0.188	0.66	11.60	5.00	
LTO TOTAL FUEL (kg) or EMISSIONS (g)			813	288	3587	13043	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				1.2	14.2	51.7	14.3
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS  
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.6
TEMPERATURE (K)	290
ABS HUMIDITY (kg/kg)	0.00053

### FUEL

SPEC	Jet A
H/C	1.87
AROM (%)	19.7

MANUFACTURER: Pratt & Whitney  
 TEST ORGANIZATION: Pratt & Whitney  
 TEST LOCATION: P7 Stand, P&W, Middletown, CT  
 TEST DATES: 14/05/1986-14/05/1986

### REMARKS

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)